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特許庁  
実用新案公報

実用新案出願公告  
昭38-16729

公告 昭 38.8.10 出願 昭 35.12.14 実願 昭 35-61690

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球 技 用 革 ボ ー ル

図面の簡単な説明

図面は本考案の実施例を示すもので、第1図は正面図、第2図は紐通し用開口部に用いられる2枚の皮革素子の拡大展開正面図、第3図は第2図の皮革素子の凸型折返し片を折返して接着した状態の裏面図、第4図は第2図A-A線の断面図、第5図は第2図の皮革素子を折り曲げて紐通し用耳を形成した状態の縦断側面図、第6図は皮革素子と皮革素子との接着状態の一部を示す拡大断面図である。

考案の詳細な説明

本考案は球体を構成するに必要な枚数だけの皮革素子をほぼ同一型に裁断して形成し、該皮革素子の中の2枚の側縁にそれぞれ紐通し用耳を形成すべき折返し片を延設し、該折返し片の基部に数個の透孔をそれぞれ縦列に穿設すると共にそれぞれ折返し片の外側縁より接続部に向つて1個または数個の山形切込みを形成して数枚のひれ状片となしその折返し片をその中心方向に寄せ合せ皮革素子の裏側に接続部を残すように折り返して適当な接着剤にてそれぞれ密着させて皮革素子を円弧状になるように張力を与えかつ接続部にも皮革素子に働く張力と同様な力を与えて耳の裏側に当る部分を弧状に形成してボールの表面より耳の側縁が突出しないように形成し、皮革素子の耳を互に咬み合せて紐を挿通したことを特徴とする球技用革ボールであつて、その目的とする所はチューブの革ボールへの出し入を簡単になし使用時において紐通し耳が球面の外方に突出させないようになし、紐を球面外方に露出させず常にボールの球面を確保する革ボールを提供するにある。

以下図面に就き説明すると、球体を構成するのに必要な枚数だけの皮革素子1 a, 1 b, 1 c, 1 d……1 nをほぼ長方形の同一形状に裁断して形成し、該皮革素子の中の2枚1 aと1 bの側縁にそれぞれ紐通し用耳を形成すべき凸型折返し片1 a', 1 b'をそれぞれ延設し該折返し片の基部に縦方向に位置して等間隔に数個の透孔2, 3をそれぞれ穿設すると共にその透孔2, 3の接続部4、

5を他の皮革素子の部分よりも若干肉厚となるように形成し、かつそれぞれの折返し片2, 3の外側縁より接続部に向つて山形の切込6, 7を設けて折返し片2, 3をその中心方向に寄せ合せて山形切込み6, 7をなくして皮革素子1 a, 1 bの裏側に接続部4, 5を中心としてそれぞれ折返して合成樹脂等の接着剤8をもつてそれぞれ密着させて皮革素子1 a, 1 bの裏側を中高の円弧状に形成すると共に接続部4, 5即ち紐通し用耳の上下端面(第2図参照)をも皮革素子1 a, 1 bの円弧状面に応じてその球面より突出しないように中高の円弧状に形成しかつ耳の裏側に当る部分を弧状に形成して窪き、しかる後に皮革素子1 aと1 bとにそれぞれ形成した耳と透孔を交互に咬み合せて皮革素子1 a, 1 bと残りの各々皮革素子1 c, 1 d……1 nをもつて球体を構成するように接合端面を互に接近させて組合せ、これら皮革素子1の接合面を被覆すべきテープ状クロムなめし革片またはテープ状合成樹脂片、布片等よりなる帯帯9をもつて皮革素子1の内周面よりその接合部分に跨がるように前記接着剤8にて順次貼着して第1図に示すようにボール10を構成する。この際に隣合せる各々の皮革素子間に球面構成のために生じる若干の間隙11(第8図参照)の部分には皮革素子1と同色または異色の着色剤を混合した合成樹脂接着剤12を充填させて接合する。13は皮革素子1にて被覆されたチューブを示し、14は紐通し用耳の咬み合部に挿通した紐を示す。なお皮革素子1群の裏面には布張りを施したものを使用することができない。

本考案は上記のように構成したから紐通し用耳の両端面がボール9の球面より突出する事なく、さらに紐通し用耳の表側および裏側のいずれの方向の断面をもボール9の外周および内周の円弧面に沿わせ得て確実に球面を形成する事が可能なので競技用として極めて最適なボールを提供できしかもチューブ13が損傷した場合または取替える場合には紐14の挿脱が容易であるから素人でも簡単にチューブ13挿の脱ができて頗る便利なるものであ

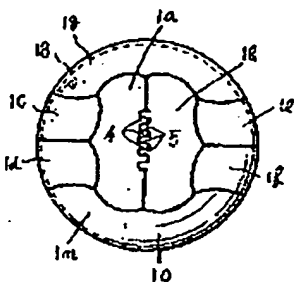
る。

實用新案登録請求の範圍

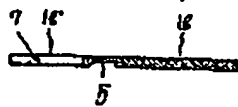
球状を構成するに必要な所要枚数の皮革素子をほぼ同一形に裁断して形成し、これら皮革素子の接合端面を互に接近して組合せ、それぞれ皮革素子の密着接合部分の内周側面にテープ片よりなる薄帯を跨がるように接着剤にて貼合せ、球面構成による皮革素子間の表面の間隙に皮革素子と同色または異色の着色剤を混合した接着剤を充填し、球状を構成した皮革素子の中の2枚の側縁にそれぞれ紐通し用耳を形成すべき折返し片を延設し該折返し片の基部に數個の透孔をそれぞれ縦列

に穿設すると共にこの透孔の連接部を他の部分より若干薄肉となしそれぞれの折返し片の外側縁より連接部に向つて1個または數個の山形切込みを形成して數枚のひれ状片となし、その折返し片をその中心方向に寄せ合せ皮革素子の裏側に連接部を残すように折り返して適当な接着剤にてそれぞれ密着させて皮革素子を円弧状になるように強力を与え、かつ連接部にも皮革素子に働く強力と同様な力を与えて耳の裏側に当る部分を弧状に形成してボールの表面より耳の側縁が突出しないように形成し、皮革素子の耳を互に咬み合せて紐を挿通したことを特徴とする球状用革ボール。

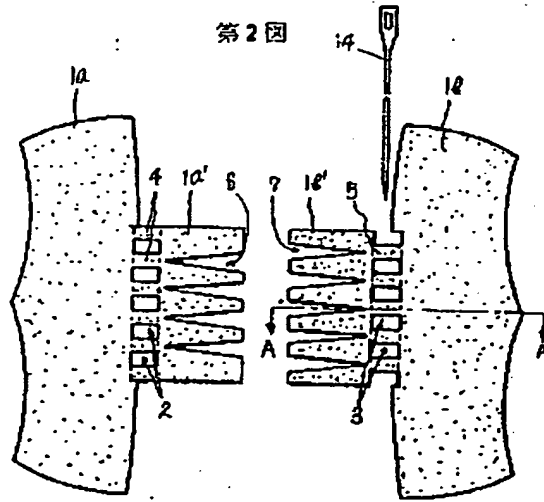
第1圖



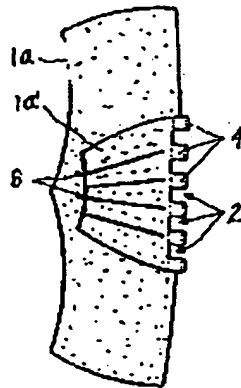
第4圖



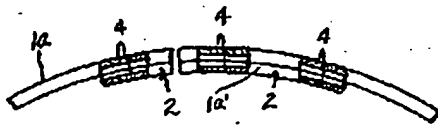
第2圖



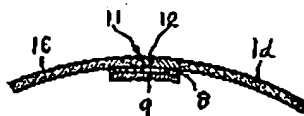
第3圖



第5圖



第8圖



Japanese Patent Office  
Examined Utility Model Application

120 D 011

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Covered Ball Used for Sports

Brief Explanation of Drawings

The drawings herein are used to illustrate a working example of this utility model. Figure 1 is a frontal view. Figure 2 is an expanded frontal view of two leather pieces highlighting the eyelets through which a loop passes. Figure 3 is a rear view of one of the leather pieces shown in Figure 2, this time with the protruding portions folded and connected. Figure 4 is a cross-section of view A-A of Figure 2. Figure 5 is a view of a longitudinal section of the leather pieces shown in Figure 2, this time with the folds made to form tabs for the eyelets. Figure 6 is an expanded cross-sectional view of a portion where a connection is made between the two leather pieces.

Detailed Explanation of the Design

A leather ball used in sports is characterized by the following. According to this design, a number of leather pieces needed to construct a ball are cut in nearly identical shapes, and the edges along the sides where two pieces meet are folded and attached to form tabs for eyelets. At the base of these folded pieces, a number of passage holes are arranged in a row along with a number of notches that are formed along the outer edge and face the interlocking portions to form a link. The folded pieces are folded so that interlocking portions are left on the rear side of the matched leather pieces along the center. A proper adhesive is used to adhere these pieces to form an arc such that the same tension is applied to the interlocked portions as to the leather pieces along the rear side and such that there are no protrusions along the edges of the outside of the ball. With the tabs of the leather pieces properly engaged, the laces are then inserted through the eyelets. The objective of this invention is to provide a leather ball in which a tube can be easily replaced, and in which the tabs that are designed for the sake of forming eyelets do not protrude from the surface of the ball when being used. In addition, the purpose is to provide a leather ball in which the lace used to hold the leather pieces together is not exposed, thus maintaining smoothness over the entire surface of the ball.

Using the following drawings to explain the contents of this invention, the number of leather pieces required to construct a ball, namely items 1a, 1b, 1c, 1d...1n are cut in approximately the same rectangular shape. Once these pieces are formed, the edges along the two sides, 1a and 1b, where the pieces meet are folded and attached to form tabs for eyelets, and these folded portions are referred to as 1a' and 1b' in the drawings. While a determined number of holes 2 and 3 are created in a longitudinal direction along these folded pieces, the interlocking portions 4 and 5 of these holes 2 and 3 are formed at

a thickness that is slightly less than that of the leather pieces themselves. Then, notches 6 and 7 that face the interlocking portions from the outside of the folded pieces 2 and 3 are set on top of these interlocking portions, and the folded pieces 2 and 3 are laid out along the center to match the notches 6 and 7, thus making for a smooth surface. The interlocked portions 4 and 5 are centered along the rear sides of the leather pieces 1a and 1b and are each folded over. A synthetic resin adhesive material 6 is used to adhere these pieces to form an arc along the front of the leather pieces 1a and 1b, and once this arc is formed such that there are no protrusions from the ends of the interlocking portions 4 and 5, namely the folded tabs (see Fig. 2), with respect to the front of the leather pieces 1a and 1b, an arc is formed along the portion where the tabs contact the rear side. Then, the tabs and holes that are formed along the leather pieces 1a and 1b are engaged, and a ball is formed through the use of these leather pieces 1a, 1b as well as any other leather pieces 1c, 1d...1n that are used. A tanned leather strip, synthetic resin tape material, or cloth band 5 can be used to cover the surface of the leather piece 1 that matches the surface of another. In order to extend this matched portion from the inner circumference of the leather piece 1, the aforementioned adhesive material 6 can be applied in a sequential fashion to form the type of ball 10 illustrated in Figure 1. When this is done, a synthetic resin material 12, which is mixed with a coloring agent that either matches or contrasts with the color of the small spaces between the pieces, can be added to fill in small spaces 11 (see Figure 6) that are created between the leather pieces during construction of the ball surface. Item 13 in the drawing represents the tube that is covered by the leather piece 1, and item 14 represents the lace that is inserted through the holes provided by the

tabs. Note that a cloth material cannot be used along the rear surface of the leather piece 1.

As noted above, this invention stipulates that the ends of the tabs that form the eyelets shall not protrude from the surface of the ball 9, and that it is possible to form a ball surface by aligning the portions along the front and rear sides of the tabs with the arc surfaces on the inside and outside of the ball 9. This provides a ball that is not only most suitable for use in sports, but is also conveniently designed to make it easy to replace the tube 13, in cases where it becomes damaged, etc., by simply removing the lace 14.

#### Scope of Registered Claims of this Utility Model

A covered ball used for sports is characterized by the following. A number of leather pieces needed to construct a ball are cut in nearly identical shapes, and the matching ends of these pieces are fit together, after which a tape or band material is applied to the surface along the inner circumference using an adhesive material. A coloring agent that either matches or contrasts with the color of the small spaces between the pieces can then be added to fill in these spaces. Through the formation of tabs along the folded edges of two pieces that are fit together in the formation of the ball, eyelets are formed through which a lace is tied. At the base of these folded pieces, a number of passage holes are arranged in a row along with a number of notches that are formed along the outer edge and face the interlocking portions to form a link. The folded pieces are folded so that interlocking portions are left on the rear side of the matched leather pieces along the center. A proper adhesive is used to adhere these pieces to form an arc such that the same tension is applied to the interlocked portions as to the leather pieces along the

rear side and such that there are no protrusions along the edges of the outside of the ball.

With the tabs of the leather pieces properly engaged, the lace is then inserted through the eyelets.